

Amendments to the Claims:

The following claims will replace all prior versions of the claims in this application (in the unlikely event that no claims follow herein, the previously pending claims will remain):

Claims 1-36. (Currently Cancelled)

37. (New) A process comprising bonding foam crumb with an acidified isocyanate.

38. (New) The process of claim 37, wherein said acidified polyisocyanate is an acidified polyisocyanate prepolymer.

39. (New) The process of claim 38, wherein said prepolymer is prepared by reacting a mixture comprising an acid, a polyisocyanate, and a polyol.

40. (New) The process of claim 39, wherein said mixture further comprises a processing oil.

41. (New) The process of claim 39, wherein said polyisocyanate includes a methanediphenyl diisocyanate.

42. (New) The process of claim 39, wherein said polyisocyanate includes 2,4-methanediphenyl diisocyanate, 4,4'-methane diphenyl diisocyanate, and/or polymeric methanediphenyl diisocyanate.

43. (New) The process of claim 39, wherein said acid is selected from the group consisting of hydrogen chloride, hydrogen fluoride, hydrogen bromide, phosphoric acid, nitrous acid, nitric acid, sulfurous acid, sulfuric acid, hypochlorous acid, chlorous acid, chloric acid, perchloric acid, benzoyl chloride, and thionyl chloride.

44. (New) The process of claim 39, wherein said acid includes anhydrous hydrogen chloride.

45. (New) The process of claim 39, wherein said polyol includes a polyether polyol.

46. (New) The process of claim 45, wherein said polyether polyol is a polyoxypropylene-polyoxyethylene polyol.

47. (New) The process of claim 39, wherein said acid is added in an amount to achieve a concentration of about 100ppm to about 4000 ppm of said acid in said prepolymer.

48. (New) The process of claim 37, wherein said foam crumb includes flexible polyurethane foam crumb.

49. (New) The process of claim 37, wherein said foam crumb has dimensions in the range of about 0.1 cm to about 5 cm.

50. (New) The process of claim 37, wherein the amount of acidified polyisocyanate used to bond said foam crumb is, relative to the total weight of foam crumb and acidified polyisocyanate, at least about 5 wt%.

51. (New) The process of claim 37, wherein said process comprises spraying said acidified polyisocyanate on said foam crumb to provide sprayed foam crumb.

52. (New) The process of claim 51, wherein said process further comprises tumbling said sprayed foam crumb.

53. (New) The process of claim 37, wherein said process further comprises curing said acidified polyisocyanate.

54. (New) The process of claim 53, wherein said curing includes subjecting the acidified polyisocyanate to steam.

55. (New) An article produced with the process of claim 37.

56. (New) The article of claim 55, wherein said article is a carpet pad, a packaging foam, an automotive headliner, a sound insulation, or a shoe sole.

57. (New) The article of claim 55, wherein said article is a carpet pad.

58. (New) A process for producing a rebonded foam product comprising the steps of:

- A) providing a particulate mass comprising foam crumb particles;
- B) providing an acidified polyisocyanate prepolymer adhesive, said adhesive prepared by combining at least the following ingredients under conditions suitable for the formation of an acidified isocyanate group containing prepolymer:
 - i) one or more polyisocyanates of the MDI series;
 - ii) at least one added acid;
 - iii) at least one polyol;
- C) applying the acidified prepolymer to the particulate mass under conditions which promote the distribution of the prepolymer throughout the bulk of the particulate mass, thereby forming a prepolymer treated mass of particles;
- D) consolidating and compressing said prepolymer treated mass of particles under conditions which provide for curing of the prepolymer to form an adhesive rebonded foam article; and
- E) recovering an adhesive rebonded foam article.